We claim:

1.   A method for compensating for a frequency offset between an ingress local area network and an egress local area network communicating over a transport network, said ingress

5   local area network employing an ingress inter-packet gap between each packet in a packet flow, said method comprising the steps of:

    receiving a plurality of packets over said transport network originating from said ingress local area network; and

    providing said plurality of received packets to said egress local area network with

10   an egress inter-packet gap between each of said received packets, wherein a size of said egress inter-packet gap is adjusted to compensate for said frequency offset.

2.   The method of claim 1, wherein a frequency of said ingress local area network exceeds a frequency of said egress local area network and said providing step further comprises

15   the step of reducing said size of said egress inter-packet gap.

3.   The method of claim 1, wherein said a frequency of said egress local area network exceeds a frequency of said ingress local area network and said providing step further comprises the step of increasing said size of said egress inter-packet gap.

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4.   The method of claim 1, wherein said size of said egress inter-packet gap is statically configured based on said frequency offset.

5.   The method of claim 1, wherein said size of said egress inter-packet gap is

25   dynamically adjusted based on a fill level of a buffer associated with an egress port of said transport network.

6.   The method of claim 1, wherein said size of said egress inter-packet gap is dynamically adjusted to prevent a buffer associated with an egress port of said transport network

30   from overflowing.

7.   The method of claim 1, wherein said size of said egress inter-packet gap is reduced by deleting idle symbols from an extended inter-packet gap.

5   8.   A method for compensating for a frequency offset between an ingress local area network and an egress local area network communicating over a transport network, said ingress local area network employing an ingress inter-packet gap between each packet in a packet flow, said method comprising the steps of:

receiving a plurality of packets over said transport network originating from said

10   ingress local area network; and

providing said plurality of received packets to said egress local area network with an egress inter-packet gap between each of said received packets, wherein a size of said egress inter-packet gap is less than a size of said ingress inter-packet gap.

15   9.   The method of claim 8, wherein said size of said egress inter-packet gap is statically configured based on an expected frequency offset.

10.   A method for compensating for a frequency offset between an ingress local area network and an egress local area network communicating over a transport network, said ingress

20   local area network employing an ingress inter-packet gap between each packet in a packet flow, said method comprising the steps of:

buffering a plurality of packets received over said transport network originating from said ingress local area network in an egress buffer;

monitoring a fill level of said egress buffer; and

25   providing said plurality of received packets to said egress local area network with an egress inter-packet gap between each of said received packets, wherein a size of said egress inter-packet gap is adjusted based on said fill level.

11.   The method of claim 10, wherein said size of said egress inter-packet gap is

30   adjusted to prevent said egress buffer from overflowing.

12.   A method for compensating for a frequency offset between an ingress local area network and an egress local area network communicating over a transport network, said ingress local area network employing an ingress inter-packet gap between each packet in a packet flow,

5   said method comprising the steps of:

receiving a plurality of packets over said transport network originating from said ingress local area network; and

providing said plurality of received packets to said egress local area network with an egress inter-packet gap between each of said received packets, wherein a size of said egress

10   inter-packet gap is adjusted to compensate for said frequency offset.

buffering a plurality of packets received over said transport network originating from said ingress local area network in a first egress buffer;

writing said plurality of packets from said first egress buffer in a second egress buffer at a rate associated with said transport network together with an inter-packet gap

15   separating each packet; and

providing said plurality of received packets to said egress local area network with an egress inter-packet gap between each of said received packets, wherein a size of said egress inter-packet gap is reduced by deleting one or more idle symbols from said inter-packet gap.

20   13.   An apparatus for compensating for a frequency offset between an ingress local area network and an egress local area network communicating over a transport network, said ingress local area network employing an ingress inter-packet gap between each packet in a packet flow, said apparatus comprising:

a port for receiving a plurality of packets over said transport network originating

25   from said ingress local area network; and

means for providing said plurality of received packets to said egress local area network with an egress inter-packet gap between each of said received packets, wherein a size of said egress inter-packet gap is adjusted to compensate for said frequency offset.

14.   The apparatus of claim 13, wherein a frequency of said ingress local area network exceeds a frequency of said egress local area network and said means for providing further comprises means for reducing said size of said egress inter-packet gap.

5   15.   The apparatus of claim 13, wherein said a frequency of said egress local area network exceeds a frequency of said ingress local area network and wherein means for providing further comprises means for increasing said size of said egress inter-packet gap.

16.   The apparatus of claim 13, wherein said size of said egress inter-packet gap is
10   statically configured based on said frequency offset.

17.   The apparatus of claim 13, wherein said size of said egress inter-packet gap is dynamically adjusted based on a fill level of a buffer associated with an egress port of said transport network.

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18.   The apparatus of claim 13, wherein said size of said egress inter-packet gap is dynamically adjusted to prevent a buffer associated with an egress port of said transport network from overflowing.

20   19.   The apparatus of claim 13, wherein said egress inter-packet gap is inserted by provider equipment between said transport network and said egress local area network.

20.   The apparatus of claim 13, wherein said size of said egress inter-packet gap is reduced by deleting idle symbols from an extended inter-packet gap.

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